

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Black Creek – St. Louis County

Water Body Segment at a Glance:

County: St. Louis
Nearby City: Brentwood
Water Body ID: 3825
Length of segment: 1.6 miles
Watershed Size: 8.6 square miles
Pollutants: Chloride and Bacteria
Source: Urban runoff/Storm sewers



Statewide Map Showing Location of Watershed

Scheduled for TMDL development: 2014-bacteria; 2017-chloride

Description of the Problem

Designated Beneficial uses of Black Creek

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation – Category B
- Secondary Contact Recreation

Use that is impaired

- Protection of Warm Water Aquatic Life
- Whole Body Contact Recreation – Category B
- Secondary Contact Recreation

Standards that apply

- Numeric criteria for chloride are found in 10 CSR 20-7.031 Table A and are dependent upon water hardness and sulfate concentrations. However, the assessment of Black Creek as impaired by chloride predates this current criteria and is based on the state's former chronic chloride criterion of 230 milligrams per liter (mg/L). An assessment based on the new hardness dependent criteria has not yet been completed.
- The criteria for bacteria are found at 10 CSR 20-7.031(4)(C), where it states that for category B waters, the *E. coli* bacteria count, measured as a geometric mean, shall not exceed 206 colonies per 100 milliliters of water (mL) during the recreational season. The recreational season is defined as being from April 1 – October 31. For secondary contact recreation, *E. coli* counts measured as a geometric mean during the recreational season shall not exceed 1,134 colonies per 100mL.

Background information and water quality data

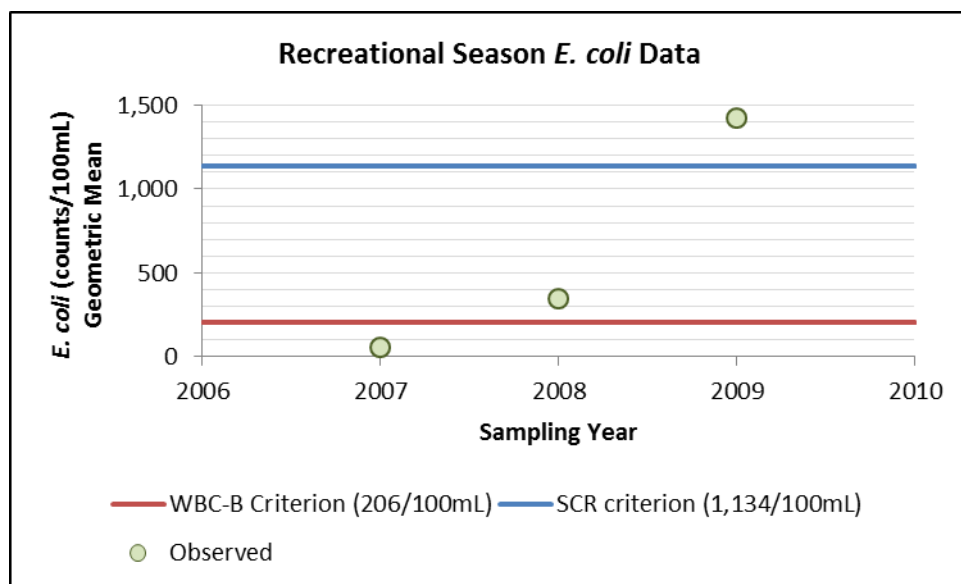
Chloride Impairment

Black Creek is an urban stream in St. Louis County that flows into Deer Creek, which is a tributary of River des Peres. The Listing Methodology used to assess Black Creek for chloride allows a water body to be judged as impaired if the criterion is exceeded more than once in the last three years of data when the stream is at stable flow conditions. Evidence for the impairment comes from data collected by the Metropolitan St. Louis Sewer District. Data collected from Black Creek from 2008 to 2010 show that there were six exceedances of the chronic chloride criterion at stable flow conditions. For this reason, Black Creek has been assessed as impaired by chloride.

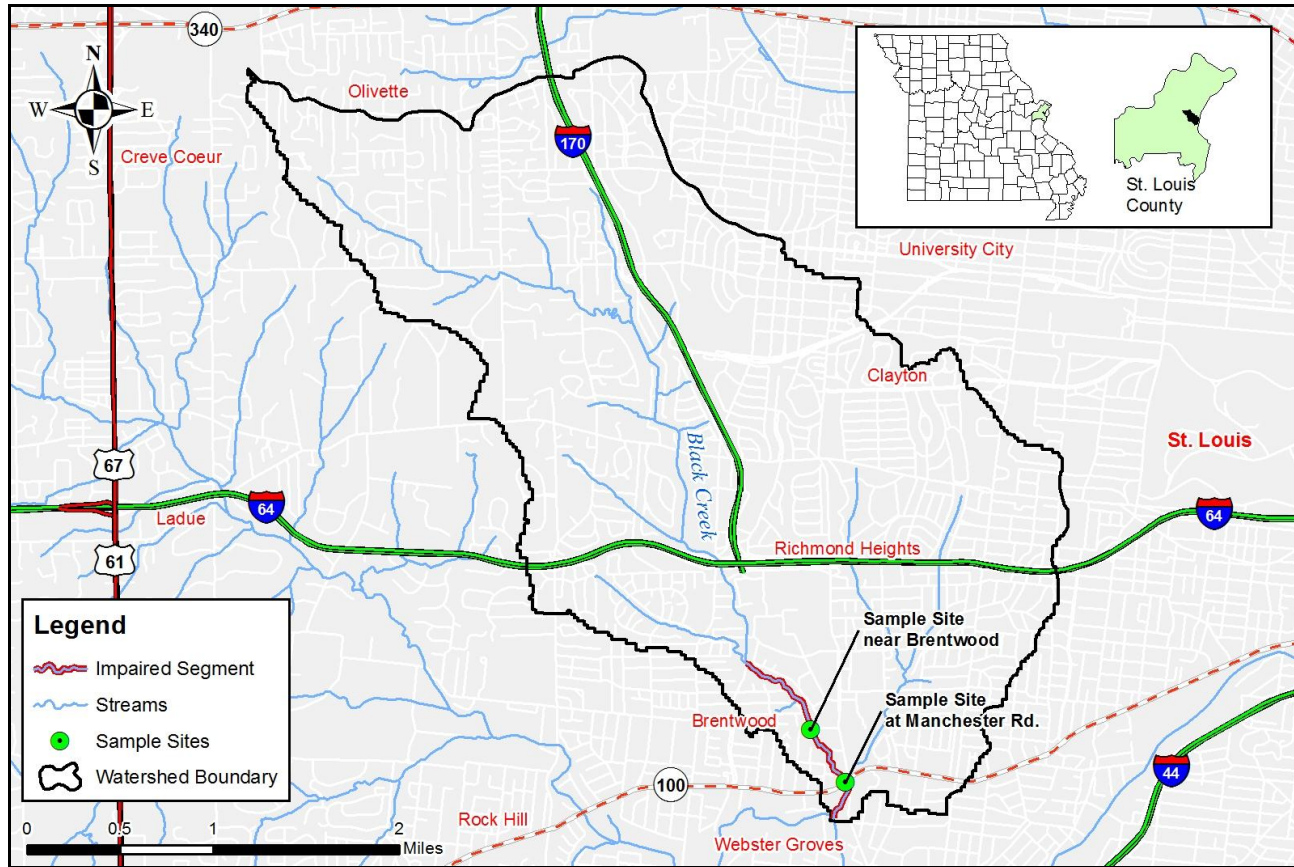
<i>Sample Site</i>	<i>Date</i>	<i>Flow (cfs)</i>	<i>Chloride (mg/L)</i>
Black Cr. at Manchester Rd.	Jan. 6, 2009	0.38	282
Black Cr. at Manchester Rd.	Jan. 21, 2009	0.42	328
Black Cr. at Manchester Rd.	March 4, 2009	0.66	322
Black Cr. at Manchester Rd.	May 5, 2009	0.85	249
Black Cr. at Manchester Rd.	Feb. 3, 2010	1.1	236
Black Cr. at Manchester Rd.	March 3, 2010	1.3	495

Bacteria Impairment

A stream is judged as impaired by bacteria if the water quality criterion is exceeded in any of the last three years for which there is adequate data (minimum of five samples taken during the recreational season). For Black Creek there was adequate bacteria data for 2007, 2008, and 2009. The whole body contact recreation category B criterion was exceeded in both 2008 and 2009. The secondary contact recreation criterion was exceeded in 2010.



Map showing the Black Creek Watershed and Sample Sites



NOTE: The final Black Creek TMDL will use the most recent and available data and information

For more information call or write:

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